



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,344	09/28/2001	Alex Horng	HORN3067/EM/7238	2305

7590 06/10/2003

Bacon & Thomas  
4th Floor  
625 Slaters Lane  
Alexandria, VA 22314

EXAMINER

JONES, JUDSON

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 06/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/964,344

Applicant(s)

HORNG ET AL.

Examiner

Judson H Jones

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

Claim 6 is objected to because of the following informalities: there is no antecedent basis for "each magnetically conducting ring of each pole plate" in the last two lines of the claim. In claim 5 Applicant recited pole plates having pole faces and magnetically conducting rings. However in claim 6 Applicant recited pole plates having pole faces and magnetically conducting plates. To avoid confusion, the language of each claim should be consistent. Therefore the last two lines of claim 6 should either read "each magnetically conducting plate of each pole plate" or the rest of the claim should be changed to be consistent with the last two lines. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen 5,945,765 A in view of Haydon 4,244,099 A. Chen discloses a stator of a brushless direct current motor having a coil set 34 with a central hole and two pole plates 4, 5, the pole plates having pole faces 43, 53 and conducting rings 45, 55, but does not disclose a combination member closely combined with the magnetically conducting rings. Haydon discloses a combination piece 10 (a housing) that holds the stator together and allows mass production of the stator as described in column 5 lines 36-45. Since Haydon and Chen are from the same field of endeavor it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized a combination piece in a brushless direct current motor for the purpose of making assembly of the device easier. In regard to the pole plates mounted in the central hole of the coil, see Haydon figures 3 and 4 which show a motor with an internal rotor 40 having magnetic poles opposing the stator pole faces.

In regard to claim 6, see Chen column 1 lines 36-39 where the invention is described as being an interior stator assembly. For an interior stator assembly, the rotor would be on the outside of the stator and the stator pole faces would be on the outer periphery of the coil set.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen as modified by Haydon as applied to claim 6 and further in view of Horng 4,987,331 A. Chen as modified by Haydon discloses the brushless motor but does not disclose multiple pole plates. Horng teaches in figure 1 and in column 2 lines 29-33 making multiple pole plates. Since Horng and Chen as modified by Haydon are from the same field of endeavor it would have been obvious at the time the invention was made for one of ordinary skill in the art to have utilized multiple pole plates in a brushless motor in order to increase the area available for flux and to

Art Unit: 2834


decrease eddy currents, thus increasing the power of the motor. In regard to the pole faces and magnetically coupled plates being adjacent to each other, locally overlapping or overlapping each other, these are the only alternatives for multiple pole plates having pole faces and magnetically coupled plates. Therefore this limitation would be inherently met by the device of Chen as modified by Haydon and Horng.


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Horng et al. 6,441,531 B1 discloses multiple pole pieces that are either overlapping (see column 4 lines 42-44) or are non-overlapping (see column 3 lines 37-41) but does not disclose a combination piece.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H Jones whose telephone number is 703-308-0115. The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JHJ   
June 7, 2003

  
Judson H. Jones  
Examiner